This document is one section from the EPA "Fiscal Year 2004 Superfund Annual Report," published in September 2005. The reference number is EPA 540-R-05-001 and OSWER Directive 9200.2-51. The entire document can be found at http://www.epa.gov/superfund/action/process/fy2004.htm.

FY 2004 SUPERFUND ANNUAL REPORT

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IV. Responding to New Realities

Superfund Program Office Perspective

The Superfund program is responding to its challenges using innovation and collaboration with others. In December 2004, the Superfund program issued the "Principles for Superfund Cleanup in the 21st Century," Office of Solid Waste and Emergency Response Directive 9200.5-18, December 8, 2004, which describes how all program processes coordinate to promote effective cleanups.

The Superfund program faces a backlog of new cleanup projects ready to begin construction. At the same time, Superfund is experiencing a growing challenge to fully fund several large and complex ongoing construction projects. Projected FY 2005 needs for existing construction and long-term remedial actions or long-term cleanups will exceed appropriated funding levels. Therefore, EPA must continue to rely on deobligations and carryover to fund new projects.

To date, a small number of sites may require additional work to address portions of the remedy that have failed or hazardous substances, pollutants or contaminants for which the cleanup levels have changed, thereby raising concerns about the protectiveness of the remedy. Effective institutional controls that help minimize the potential for human exposure to contamination are EPA's greatest asset in avoiding remedy failure and maintaining their integrity. A key challenge to the effective use of institutional controls is the overlapping and often disconnected responsibilities at different levels of government for implementation, monitoring, and enforcement. EPA's Superfund program is taking a leadership role in the development of a voluntary national network of interactive Federal, State, Tribal, local, and industry institutional controls tracking systems to both enhance their effectiveness and provide information on all cleanup sites in a community.

Maintaining a positive ratio of responsible party-lead to EPA funded projects is important to the outyear forecast for Superfund. Preserving a two-thirds responsible party-lead to one-third EPA funded projects ratio maximizes the leveraging of appropriated funds in a given year, minimizes the States' near-term cost share contributions, and reduces States' long-term liability for operation and maintenance of sites. Increasing the reuse of Superfund sites can diminish the costs to States and responsible parties for tracking and monitoring sites in the future. Shifting these costs may further reduce the long-term societal cost of these projects.

In the future, EPA will continue to address immediate threats to public health through the removal program and will continue to place on the National Priorities List sites that pose long-term threats and cannot be addressed with other State or Federal remedial programs. Superfund will continue to monitor and evaluate sites that do not receive funding, and research alternative approaches to address unfunded sites. In the 21st century, the Superfund program is supporting a vigorous post-construction completion program to ensure that remedial actions provide for the long-term protection of human health and the environment as well as to return sites to beneficial uses.

Superfund Enforcement Office Perspective

Maximizing responsible party-lead activities at every stage of the cleanup process is now more important than ever. Superfund enforcement is increasing its efforts to get responsible private parties to conduct site activities earlier in the cleanup process (e.g., at the Remedial Investigation and Feasibility Study stage). EPA will continue to emphasize the importance of its "enforcement first" policy. This strategy will allow EPA to focus limited resources on sites where viable, potentially responsible parties do not exist or lack the funds or capabilities needed to conduct the cleanup.

In addition, the Agency is moving toward strengthening "financial assurance" for operating hazardous waste sites (and for responsible parties doing work at Superfund sites) to ensure that the money is available in the future for site closure and cleanup. Financial assurance could reduce the need for EPA and the U.S. taxpayer to pay for a potentially costly cleanup.

EPA will increase its efforts to ensure that institutional controls are effectively implemented at Superfund sites. In September 2004, EPA issued a strategy that sets forth a five-year plan to ensure that effective institutional controls are in place and functioning properly at approximately 900 sites that have achieved construction completion.

Removal Program Office Perspective

There are more than 30,000 accidental releases of hazardous materials reported to the Federal government each year. Emergencies range from small scale spills to large events requiring prompt action and evacuation of nearby populations. For example, on June 28, 2004, two trains collided near Macdona, TX. The collision resulted in derailment of four locomotives and 35 railcars, and a small fire started by the release of 60 tons of chlorine. Through EPA's response to the incident, the chlorine was collected into large mobile tanks (frac tanks), and air monitoring was conducted in the surrounding area.

EPA will continue to ensure that nontime-critical and time-critical removal actions are conducted when necessary to protect human health and the environment by funding response actions directly or overseeing and enforcing actions conducted by potentially responsible parties. In carrying out these responsibilities, consistent with the National Oil and Hazardous Substances Contingency Plan and the National Response Plan, EPA will closely coordinate all removal actions with other EPA programs (including the Superfund remedial program), other Federal agencies, States, Tribes, and local governments.

EPA's core emergency response program will respond quickly and effectively to chemical, oil, biological, and radiological releases and will continuously improve coordination mechanisms to enable timely and effective responses to simultaneous, large-scale national emergencies, including homeland security incidents. Response systems and processes (e.g., Incident Command System, National Incident Coordination Teams, Regional Incident Coordination Teams) will be overseen by relevant Agency members at all levels of management.

Using the process established under the Agency's National Approach to Response, EPA will: (1) maximize EPA assets; and (2) promote consistency and coordination across the Regions, the Agency's specialized response teams, laboratories, and Headquarters. The National Approach to Response work groups will update and improve policies, guidelines, procedures, and plans. All of EPA's preparedness and response programs (including those in the Regions) will consistently implement the National Approach to Response policies, guidance, and other communication materials.

EPA will continuously provide state-of-the-art equipment, training, and exercises for its emergency response staff. Training and exercises will incorporate the latest scientific methods, approaches, and procedures for detection, analysis, response, decontamination, and health and safety needs for chemical, biological, and radiological agents.

To improve coordination mechanisms and the speed and effectiveness with which EPA responds to national emergencies, EPA participated in several homeland security exercises during FY 2004. Two major exercises held in the summer of 2004 include: the EPA Radiation Emergency Exercise (Ruby Slippers); and the Federal Homeland Security Exercise (Determined Promise 2004). Operation Ruby Slippers held in Leavenworth, Kansas was conducted by EPA's Office of Radiation and Indoor Air. More than 130 EPA emergency responders and experts from across the country participated in this exercise that enabled key staff to walk through the emergency response plan, identifying and resolving any problems. The Department of Defense Northern Command sponsored Operation Determined Promise 2004, involving five simulated events in southern Virginia. EPA participated in the exercise in an advisory role to the Incident Commander, and provided sampling and decontamination support.

Agency emergency response staff consistently uses crisis and information management systems. Large quantities of information will be effectively managed and disseminated during response incidents. The data will be used to manage response and to assist EPA in providing unified and consistent public messages. The latest information technology developments will be incorporated into system development (e.g., web portals).

Federal Facilities Office Perspective

The challenges facing the Federal government include conditions unique to the Federal sector, such as cleaning up a nuclear weapons complex containing radiological and mixed wastes. These present unique technical and practical challenges. The Department of Defense's unique challenge is addressing active and former facilities with military munitions and residual contamination. There are also facilities where Federal operations (e.g., Department of Defense and National Aeronautics and Space Administration) generated environmental problems similar to those in the private sector (e.g., releases of hazardous substances to ground water, contaminant spills). Likewise, some Superfund sites are on lands owned or administered by the Federal government (typically the Departments of the Interior and Agriculture), where either the Federal government or private parties or both disposed of or generated waste through operations such as mining.

In the future, EPA will propose a limited number of Federal facility sites to the National Priorities List. Most of the Department of Defense and Department of Energy facilities were previously evaluated for listing, and eligible sites are already on the National Priorities List. Other Federal agencies are addressing sites that scored below the Hazard Ranking System cutoff level of 28.5 using other authorities, or these sites are awaiting final decisions. Sites formerly owned by the Federal government continue to challenge the agencies, especially where military munitions are present.

Spending authority for Federal facility environmental cleanups remained relatively constant during the past decade, with a slight overall increase for the Department of Energy and a slight decrease for the Department of Defense. The Department of Energy anticipates its future annual funding needs will begin to decline in FY 2007 because of completion of construction at three of its large sites. The Department of Defense projects remedies in place for all of its "high-risk" sites by 2008. These accomplishments will allow the Services to focus their efforts on sites they deem as "medium-risk" or "low-risk."

Because of continued progress in finalizing remedies, the Agency anticipates a slight increase in the number of remedies selected at National Priorities List sites in FY 2005. The Agency also expects to see a slight increase in the annual number of Federal facilities achieving construction completion, assuming funding remains relatively stable for the Department of Defense and Department of Energy.

With more projects reaching construction completion, efforts will shift toward post-construction completion activities, including Five-Year Reviews, monitoring remedies (including the effectiveness of institutional controls), and transferring properties for reuse. With few exceptions, most Federal facilities on the National Priorities List will require institutional controls.